CSE 123 - Discussion Section

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Discussion Sections Structure

- Questions posted on Piazza.
  - Projects, HWs, Lecture content.

- Topics of interest are welcome! Post them on Piazza.

- Project Overview.
Project 1 - Sliding Window

- Packet based data transmission.
- Packets can get
  - dropped
  - delayed
  - corrupted!
- Sequence number and acknowledgement.
- Limiting the number of “in-flight” frames.
- Sender window and Receiver window.
Sliding Window Protocol - Concepts

- Framing
  - Converting large inputs into small-sized frames

- Flow control
  - Sender and receiver buffers
  - Frame ordering

- Reliable communication
  - Detecting missing or corrupted frames
  - Acknowledgements and retransmission
Coding Instructions

- Language used: C/C++
- Must compiles and execute on lab machines
- Compiling on Mac OS might give issues related to libnsl
Skeleton code - common.h

Useful constants and structures
Skeleton code - util.h, util.c

Linked list and time operations
Skeleton code - sender.c, sender.h

- Implements sender thread
- Perform 4 major steps
  - Receive and process commands from input
  - Transmit/buffer messages
  - Process incoming acknowledgements
  - Retransmit timed out frames
  - Rinse and repeat
Skeleton code - receiver.c,receiver.h

- Implements receiver thread
- 1 major responsibility
  - Receive and “acknowledge” incoming messages from senders
Submission Instructions

• Prepare a design document explaining
  ○ Important data structures
  ○ Frame structure
  ○ Algorithms used
  ○ Anything you want to highlight to the graders!

• make submit
Thank you!